

AMENDMENTS TO THE CLAIMS:

The following listing of claims replaces all prior listings, and all prior versions, of claims in the application.

LISTING OF CLAIMS:

1. (Currently amended) A molecular detection method comprising visualizing and identifying an individual chain molecule, immobilized on a plastic substrate surface and as immobilized being uprightly disposed relative to said plastic substrate surface, by probing with a scanning probe microscope in solution so as to observe a profile of the plastic substrate surface having individual chain molecules immobilized thereon and observe the individual chain molecules immobilized uprightly on the plastic substrate surface.

2. (Previously presented) The molecular detection method according to Claim 1, wherein the chain molecule immobilized on the plastic substrate surface is an uprightly disposed single strand molecule.

3. (Original) The molecular detection method according to Claim 2, wherein the uprightly disposed single strand molecule is a nucleic acid, a peptide nucleic acid, a peptide, a glycopeptide, a protein, a glycoprotein, a polysaccharide, a synthetic polymer, or an analog thereof.

4. (Previously presented) The molecular detection method according to Claim 1, wherein the chain molecule immobilized on the plastic substrate surface is a

multiple strand molecule comprising an uprightly disposed single strand molecule and at least one chain molecule that can bind to the single strand molecule.

5. (Original) The molecular detection method according to Claim 4, wherein the multiple strand molecule is a complex of one or more types of molecules selected from a nucleic acid, a peptide nucleic acid, a peptide, a glycopeptide, a protein, a glycoprotein, a polysaccharide, a synthetic polymer, or an analog thereof.

6. (Previously presented) A molecular counting method comprising detecting a molecule by the method according to Claim 1, and counting the number of detected chain molecules per unit area.

7. (Previously presented) A molecular localization detection method comprising detecting a molecule by the method according to Claim 1, and counting the number of detected chain molecules per unit area, thus giving molecular localization information.

8. (Withdrawn) A molecular detection system for detecting a chain molecule immobilized on a substrate, the system comprising a jig for holding the substrate, a container housing the substrate and a solution, a probe, a probe detector, a drive mechanism for scanning the substrate or the probe in three dimensions, and a drive control circuit for controlling the drive mechanism.

9. (Withdrawn) The molecular detection system according to Claim 8, wherein it further comprises a device which visualizes the chain molecule.
10. (Withdrawn) The molecular detection system according to Claim 8, wherein it further comprises a device which counts the chain molecules.
11. (Withdrawn) The molecular detection system according to Claim 8, wherein it further comprises a device which provides information about localization of the chain molecules.
12. (Withdrawn) The molecular detection system according to Claim 11, wherein it further comprises a device which discriminates between substrates with chain molecules immobilized thereon.
13. (Withdrawn) The molecular detection system according to Claim 8, wherein the chain molecule immobilized on the substrate is a single strand molecule uprightly disposed on the substrate.
14. (Withdrawn) The molecular detection system according to Claim 13, wherein the uprightly disposed single strand molecule is a nucleic acid, a peptide nucleic acid, a peptide, a glycopeptide, a protein, a glycoprotein, a polysaccharide, a synthetic polymer, or an analog thereof.

15. (Withdrawn) The molecular detection system according to Claim 8, wherein the chain molecule immobilized on the substrate is a multiple strand molecule comprising the uprightly disposed single strand molecule and at least one chain molecule that can bind to the single strand molecule.

16. (Withdrawn) The molecular detection system according to Claim 15, wherein the multiple strand molecule is a complex of one or more types of molecules selected from a nucleic acid, a peptide nucleic acid, a peptide, a glycopeptide, a protein, a glycoprotein, a polysaccharide, a synthetic polymer, or an analog thereof.

17. (Previously presented) A production process for a substrate with a chain molecule immobilized thereon, the production process including the method according to Claim 1.

18. (Withdrawn) A production process for a substrate with a chain molecule immobilized thereon, the production process employing the system according to Claim 8.

19. (Currently amended) A molecular detection method comprising visualizing and identifying an individual chain molecule, immobilized on a plastic substrate surface and as immobilized being uprightly disposed relative to said plastic substrate surface, by probing with a scanning probe microscope in solution so as to observe a profile of the plastic substrate surface having individual chain molecules immobilized thereon and observe the individual chain molecules immobilized

uprightly on the plastic substrate surface, wherein the chain molecule immobilized on the plastic substrate surface is a nucleic acid.

20. (Cancelled).

21. (Previously presented) The molecular detection method according to Claim 19, wherein the chain molecule immobilized on the substrate surface is a multiple strand molecule comprising the nucleic acid and at least one chain molecule that can bind to the nucleic acid.

22. (Previously presented) The molecular detection method according to Claim 21, wherein the multiple strand molecule is a complex of the nucleic acid and one or more types of molecules selected from a nucleic acid, a peptide nucleic acid, a peptide, a glycopeptide, a protein, a glycoprotein, a polysaccharide, a synthetic polymer, or an analog thereof.

23. (Previously presented) A molecular counting method comprising detecting a molecule by the method according to Claim 19, and counting the number of detected chain molecules per unit area.

24. (Previously presented) A molecular localization detection method comprising detecting a molecule by the method according to Claim 19, and counting the number of detected chain molecules per unit area, thus giving molecular localization information.

25. (Previously presented) A production process for a substrate with a chain molecule immobilized on a surface thereof, the production process including the method according to Claim 19.

26. (Cancelled).

27. (Previously presented) The molecular detection method according to Claim 19, wherein said individual chain molecule, as immobilized, is uprightly disposed relative to the substrate surface so as to extend substantially perpendicularly from said substrate surface.

28. (Previously presented) The molecular detection method according to Claim 1, wherein said individual chain molecule, as immobilized, is uprightly disposed relative to the substrate surface so as to extend substantially perpendicularly from said plastic substrate surface.

29. (Previously presented) The molecular detection method according to Claim 1, wherein said profile is observed using an atomic force acting between the substrate surface having the individual chain molecules immobilized thereon and a probe of the scanning probe microscope.

30. (Previously presented) The molecular detection method according to Claim 29, wherein said profile is observed by measuring an amount of flexing of said probe caused by said atomic force.

31. (Previously presented) The molecular detection method according to Claim 1, wherein the substrate having chain molecules immobilized on the surface thereof is a DNA chip or a DNA microarray.

32. (Previously presented) The molecular detection method according to Claim 1, wherein the substrate having chain molecules immobilized on the surface thereof is a microtiter plate or a protein chip.

33. (Previously presented) The molecular detection method according to Claim 19, wherein said profile is observed using an atomic force acting between the substrate surface having the individual chain molecules immobilized thereon and a probe of the scanning probe microscope.

34. (Previously presented) The molecular detection method according to Claim 33, wherein said profile is observed by measuring an amount of flexing of said probe caused by said atomic force.